



DEPARTMENT OF REGULATORY AND ECONOMIC RESOURCES (RER)  
BOARD AND CODE ADMINISTRATION DIVISION

MIAMI-DADE COUNTY  
PRODUCT CONTROL SECTION

11805 SW 26 Street, Room 208  
Miami, Florida 33175-2474  
T (786) 315-2590 F (786) 315-2599

[www.miamidade.gov/economy](http://www.miamidade.gov/economy)

## NOTICE OF ACCEPTANCE (NOA)

**Groff Aluminum Florida Corp.**  
**13125 N.W. 47<sup>th</sup> Avenue**  
**Opa-Locka, Florida 33054**

### SCOPE:

This NOA is being issued under the applicable rules and regulations governing the use of construction materials. The documentation submitted has been reviewed and accepted by Miami-Dade County RER- Product Control Section to be used in Miami Dade County and other areas where allowed by the Authority Having Jurisdiction (AHJ).

This NOA shall not be valid after the expiration date stated below. The Miami-Dade County Product Control Section (In Miami Dade County) and/or the AHJ (in areas other than Miami Dade County) reserve the right to have this product or material tested for quality assurance purposes. If this product or material fails to perform in the accepted manner, the manufacturer will incur the expense of such testing and the AHJ may immediately revoke, modify, or suspend the use of such product or material within their jurisdiction. RER reserves the right to revoke this acceptance, if it is determined by Miami-Dade County Product Control Section that this product or material fails to meet the requirements of the applicable building code.

This product is approved as described herein, and has been designed to comply with the High Velocity Hurricane Zone of the Florida Building Code.

### DESCRIPTION: Aluminum Slatted Awning Shutter

**APPROVAL DOCUMENT:** Drawing No. 12-084, titled "Hurricane Awning", sheets 1 through 7 of 7, prepared by Tilteco, Inc., dated March 15, 2012, last revision #1 dated March 15, 2012, signed and sealed by Walter A. Tillit Jr., P.E., on March 16, 2012, bearing the Miami-Dade County Product Control revision stamp with the Notice of Acceptance number and the expiration date by the Miami-Dade County Product Control Section.

### MISSILE IMPACT RATING: Large and Small Missile Impact Resistant

**LABELING:** Each unit shall bear a permanent label with the manufacturer's name or logo, city, state, the following statement: "Miami-Dade County Product Control Approved", and NOA number, per TAS-201, TAS-202, and TAS-203, unless otherwise noted herein.

**RENEWAL** of this NOA shall be considered after a renewal application has been filed and there has been no change in the applicable building code negatively affecting the performance of this product.

**TERMINATION** of this NOA will occur after the expiration date or if there has been a revision or change in the materials, use, and/or manufacture of the product or process. Misuse of this NOA as an endorsement of any product, for sales, advertising or any other purposes shall automatically terminate this NOA. Failure to comply with any section of this NOA shall be cause for termination and removal of NOA.

**ADVERTISEMENT:** The NOA number preceded by the words Miami-Dade County, Florida, and followed by the expiration date may be displayed in advertising literature. If any portion of the NOA is displayed, then it shall be done in its entirety.

**INSPECTION:** A copy of this entire NOA shall be provided to the user by the manufacturer or its distributors and shall be available for inspection at the job site at the request of the Building Official.

This NOA revises NOA # 09-0312.19 and consists of this page 1, evidence submitted pages E-1, E-2, E-3, & E-4 as well as approval document mentioned above.

The submitted documentation was reviewed by **Helmy A. Makar, P.E., M.S.**



*Helmy A. Makar*  
10/04/2012

NOA No. 12-0529.22  
Expiration Date: 08/01/2013  
Approval Date: 10/04/2012

**NOTICE OF ACCEPTANCE: EVIDENCE SUBMITTED**

**1. EVIDENCE SUBMITTED UNDER PREVIOUS APPROVAL #97-0916.04**

**A. DRAWINGS**

1. *Drawings prepared by Groff Metals of Florida, Inc. titled "Hurricane Awning", Drawing No. 97-212, Sheets 1 to 6 of 6, dated 08/04/97 with no revisions signed and sealed by W. A. Tillit Jr., PE*

**B. TEST**

1. *Exterior Elevation Case I: Test report on Large Missile Impact Test, Cyclic Wind Pressure Test and Uniform Static Air Pressure Test of awning shutter prepared by Miami Testing Laboratory, Inc., Report No. **MTL-16188**, dated 12/12/94, signed and sealed by D. G. Ober, PE.*
2. *Exterior Elevation Case II: Test report on Large Missile Impact Test, Cyclic Wind Pressure Test and Uniform Static Air Pressure Test of awning shutter prepared by Construction Testing Corporation, Report No. **CTC-96026**, dated 07/16/96 signed and sealed by C. G. Tyson, P.E.*

**C. CALCULATIONS**

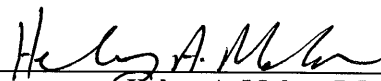
1. *Anchor analysis and calculations, dated 01/10/95, pages 1 through 3 of 3 prepared by Tilteco, Inc., signed and sealed by W. A. Tillit Jr., PE.*
2. *Anchor analysis and calculations, dated 07/22/96, pages 1 though 5 of 5, prepared by Tilteco Inc, signed and sealed by W. A. Tillit Jr. PE.*

**D. MATERIAL CERTIFICATION**

1. *Mill Certified Inspection Report issued by Alsc/Hastings Building Products, dated 05/01/95 with chemical composition and physical properties of aluminum alloy 3105-H14.*
2. *Certified Tensile Test Report No. MTS 257151-A, sheet aluminum sample 16256, prepared by Center For Applied Engineering, Inc. Material Testing Services, dated 12/22/94 per ASTM E8-93, signed by R. G. Miller, PE.*
3. *Mill Certified Inspection Report issued by Groff Metals of Florida, dated 05/12/97 with chemical composition and physical properties of aluminum alloy 3105-H14*
4. *Certified Tensile Test Report No QCM Job # 6FM-1559, sheet aluminum samples CTC-96-026-A-Out and CTC-96-026-A-In, prepared by QC Metallurgical Inc. dated 06/24/96, per ASTM E8-93, signed and sealed by F. G. Grate PE.*

**E. STATEMENTS**

1. *Manufacturer/Private Labeler Agreement, prepared by Re-Col Enterprises, dated 08/13/97 signed by Antonio L. Requejo and Notarized by G. E. Rojas.*



**Helmy A. Makar, P.E., M.S.**  
**Product Control Unit Supervisor**

**NOA No. 12-0529.22**

**Expiration Date: 08/01/2013**

**Approval Date: 10/04/2012**

**Groff Aluminum Florida Corp.**

**NOTICE OF ACCEPTANCE: EVIDENCE SUBMITTED**

**2. EVIDENCE SUBMITTED UNDER PREVIOUS APPROVAL #99-0623.03**

**A. DRAWINGS**

1. *None.*

**B. TESTS**

1. *None. See previous approval number 97-0916.04.*

**C. CALCULATIONS**

1. *None. See previous approval number 97-0916.04.*

**D. MATERIAL CERTIFICATIONS**

1. *None. See previous approval number 97-0916.04.*

**E. STATEMENTS**

1. *Letter by Groff Metals of Florida, Inc., dated June 15, 1999, signed by Ms. Luisa M. Requejo certifying that the product has not changed.*
2. *Letter by Tilteco Inc., dated June 15, 1999, signed and sealed by Walter A. Tillit Jr., P.E., certifying that he is still in the engineering business.*

**3. EVIDENCE SUBMITTED UNDER PREVIOUS APPROVAL #02-0611.01**

**A. DRAWINGS**

1. *Drawing No. 02-393, titled " Hurricane Awning ", sheets 1 through 7 of 7, prepared by Tilteco, Inc., dated July 30, 2002, sign and sealed by Walter A. Tillit, Jr. P.E.*

**B. TESTS**

1. *None.*

**C. CALCULATIONS**

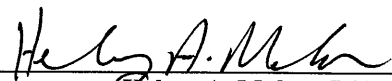
1. *None.*

**D. MATERIAL CERTIFICATIONS**

1. *None.*

**E. STATEMENTS**

1. *Letter by Groff Metals of Florida, Inc., dated August 20, 2002, signed by Ms. Elsa M. Geilin.*



Helmy A. Makar, P.E., M.S.  
Product Control Unit Supervisor  
NOA No. 12-0529.22  
Expiration Date: 08/01/2013  
Approval Date: 10/04/2012

**NOTICE OF ACCEPTANCE: EVIDENCE SUBMITTED**

**4. EVIDENCE SUBMITTED UNDER PREVIOUS APPROVAL #05-0817.10**

**A. DRAWINGS**

1. *Drawing No. 05-077, titled " Hurricane Awning ", sheets 1 through 7 of 7, prepared by Tilteco, Inc., dated April 25, 2005, last revision #1 dated April 25, 2005, signed and sealed by Walter A. Tillit Jr., P.E.*

**B. TEST**

1. *None.*

**C. CALCULATIONS**

1. *Anchor analysis and calculations, dated April 25, 2005, pages 1 through 23 of 23 prepared by Tilteco, Inc., signed and sealed by W. A. Tillit Jr., P.E.*

**D. QUALITY ASSURANCE**

1. *By Miami-Dade County Building Code Compliance Office.*

**E. MATERIAL CERTIFICATION**

1. *None.*

**F. STATEMENTS**

1. *Letter by Tilteco Inc., dated June 06, 2005, signed and sealed by Walter A. Tillit Jr., P.E., certifying that drawings 05-077 are in compliance with the Florida Building Code 2004 Edition.*

**5. EVIDENCE SUBMITTED UNDER PREVIOUS APPROVAL # 07-0322.09**

**A. DRAWINGS**

1. *None.*

**B. TEST**

1. *None.*

**C. CALCULATIONS**

1. *None.*

**D. QUALITY ASSURANCE**

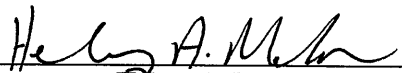
1. *By Miami-Dade County Building Code Compliance Office.*

**E. MATERIAL CERTIFICATION**

1. *None.*

**F. STATEMENTS**

1. *Letter by Tilteco Inc., dated March 20, 2007, signed and sealed by Walter A. Tillit Jr., P.E., certifying that he continues in the engineering business.*



**Helmy A. Makar, P.E., M.S.**  
**Product Control Unit Supervisor**  
**NOA No. 12-0529.22**  
**Expiration Date: 08/01/2013**  
**Approval Date: 10/04/2012**

**NOTICE OF ACCEPTANCE: EVIDENCE SUBMITTED**

**6. EVIDENCE SUBMITTED UNDER PREVIOUS APPROVAL # 09-0312.19**

**A. DRAWINGS**

1. *Drawing No. 09-029, titled " Hurricane Awning ", sheets 1 through 7 of 7, prepared by Tilteco, Inc., dated March 10, 2009, last revision #1 dated March 10, 2009, signed and sealed by Walter A. Tillit Jr., P.E., on March 10, 2009.*

**B. TEST**

1. *None.*

**C. CALCULATIONS**

1. *None.*

**D. QUALITY ASSURANCE**

1. *By Miami-Dade County Building Code Compliance Office.*

**E. MATERIAL CERTIFICATION**

1. *None.*

**F. STATEMENTS**

1. *Letter by Tilteco Inc., dated March 10, 2009, signed and sealed by Walter A. Tillit Jr., P.E., detailing the changes to the drawings.*

**7. NEW EVIDENCE SUBMITTED**

**A. DRAWINGS**

1. *Drawing No. 12-084, titled " Hurricane Awning ", sheets 1 through 7 of 7, prepared by Tilteco, Inc., dated March 15, 2012, last revision #1 dated March 15, 2012, signed and sealed by Walter A. Tillit Jr., P.E., on March 16, 2012.*

**B. TEST**

1. *None.*

**C. CALCULATIONS**

1. *None.*

**D. QUALITY ASSURANCE**

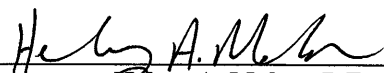
1. *By Miami-Dade County Department of Regulatory and Economic Resources.*

**E. MATERIAL CERTIFICATION**

1. *None.*

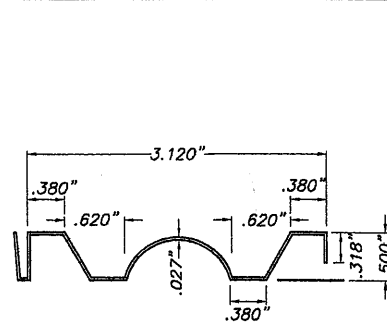
**F. STATEMENTS**

1. *Letter by Tilteco Inc., dated April 20, 2012, signed and sealed by Walter A. Tillit Jr., P.E., detailing the changes to the drawings and stating compliance with the FBC, 2010 Code.*

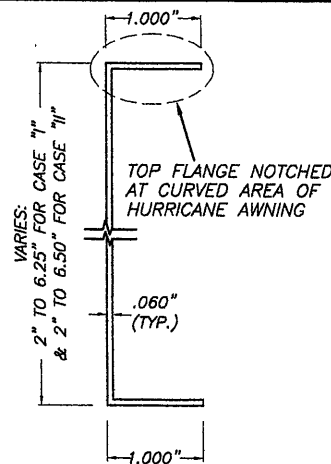


**Helmy A. Makar, P.E., M.S.**  
**Product Control Unit Supervisor**  
**NOA No. 12-0529.22**

**Expiration Date: 08/01/2013**  
**Approval Date: 10/04/2012**



**1 SLAT**  
(SHEET METAL)  
SCALE: 1/2" = 1"



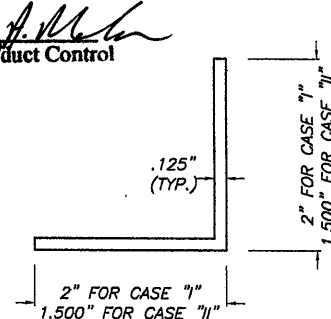
**2 SIDE STIFFENER**  
(SHEET METAL)  
SCALE: 1/2" = 1"

**3 PURLIN**  
(SHEET METAL)  
SCALE: 1/2" = 1"

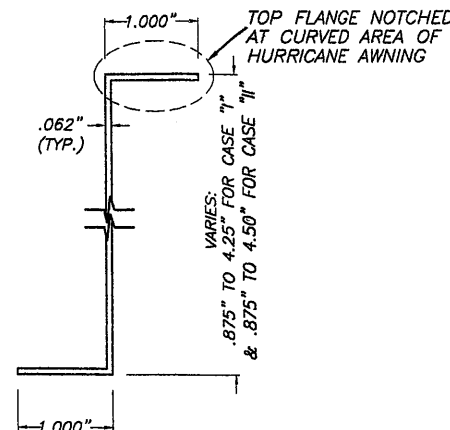
PRODUCT REVISED  
as complying with the Florida  
Building Code  
Acceptance No 12-0529.22  
Expiration Date 08/01/2013  
By Walter A. Tillit Jr.  
Miami Dade Product Control

**4 AWNING HINGE (FEMALE)**  
6063-T6 ALLOY  
SCALE: 1/2" = 1"

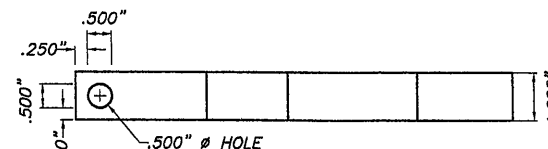
**5 AWNING HINGE (MALE)**  
(EXTRUSION)  
SCALE: 1/2" = 1"



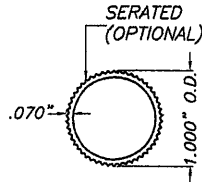
**7 ANGLE BRACKETS**  
(EXTRUSION)  
(6063-T6 ALLOY)  
3" LONG FOR CASE "I"  
1 3/4" LONG FOR CASE "II"



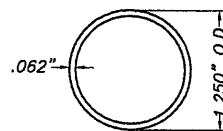
**8 INTERMEDIATE STIFFENER**  
(SHEET METAL)  
SCALE: 1/2" = 1"



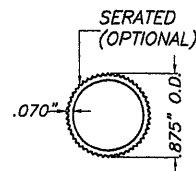
**12 TIE DOWN STRAP**  
(SHEET METAL)  
SCALE: 1/4" = 1"



**6 1" O.D. BRACE**  
FOR UP TO 60" PROJECTION  
6063-T6 ALLOY  
SCALE: 1/2" = 1"

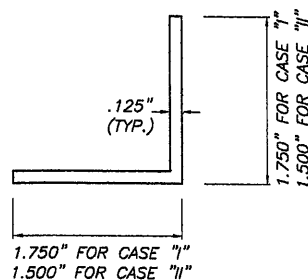


**6' 1 1/4" O.D. BRACE**  
FOR PROJECTION > 60" UP TO 70"  
6063-T6 ALLOY  
SCALE: 1/2" = 1"

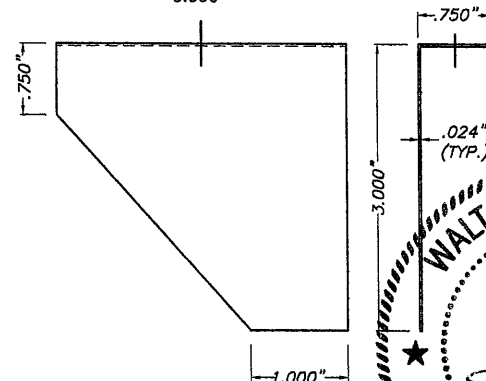
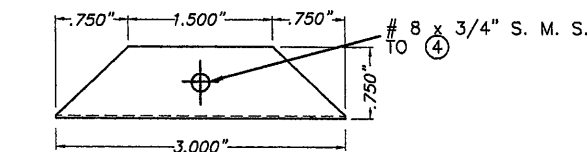


**6A 7/8" O.D. BRACE**  
FOR UP TO 60" PROJECTION  
6063-T6 ALLOY  
SCALE: 1/2" = 1"

**6'A 1" O.D. BRACE**  
FOR PROJECTION > 60" UP TO 70"  
6063-T6 ALLOY  
SCALE: 1/2" = 1"

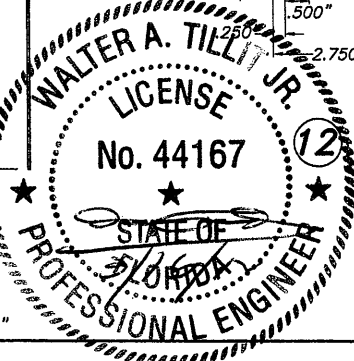


**9 REINFORCING ANGLE**  
(EXTRUSION)  
SCALE: 1/2" = 1"



**11 END CAP**  
(SHEET METAL)  
SCALE: 1/2" = 1"

**10 REINFORCING INTERIOR SKIN**  
(SHEET METAL)  
SCALE: 1/2" = 1"



## GENERAL NOTES:

1. HURRICANE AWNING SHOWN ON THIS PRODUCT APPROVAL DOCUMENT (P.A.D.) HAS BEEN VERIFIED FOR CODE COMPLIANCE IN ACCORDANCE WITH THE 2010 EDITION OF THE FLORIDA BUILDING CODE. THIS HURRICANE AWNING MAY BE INSTALLED AT HIGH VELOCITY HURRICANE ZONES. DESIGN WIND LOADS SHALL BE DETERMINED AS PER SECTION 1620 OF THE ABOVE MENTIONED CODE, USING ASCE 7-10 AND SHALL NOT EXCEED THE MAXIMUM (A.S.D.) DESIGN PRESSURE RATING INDICATED ON SHEET 7. IN ORDER TO VERIFY THE ABOVE CONDITION, ULTIMATE DESIGN WIND LOADS DETERMINED PER ASCE 7-10 SHALL BE FIRST REDUCED TO A.S.D. DESIGN WIND LOADS BY MULTIPLYING THEM BY 0.6 IN ORDER TO COMPARE THESE W/ MAX. (A.S.D.) DESIGN PRESSURE RATING INDICATED ON SHEET 7.

IN ORDER TO VERIFY THAT ANCHORS ON THIS P.A.D., AS TESTED, WERE NOT OVERSTRESSED, A 33% INCREASE IN ALLOWABLE LOADS FOR WIND LOADS WAS NOT USED IN THEIR ANALYSIS. FASTENERS SPACING IN WOOD HAS BEEN DETERMINED IN ACCORDANCE WITH N.D.S. HURRICANE AWNING'S ADEQUACY FOR IMPACT AND FATIGUE RESISTANCE HAS BEEN VERIFIED IN ACCORDANCE WITH SECTION 1626 OF THE ABOVE MENTIONED CODE AS PER MTL LAB REPORT # 16188 (FOR CASE I) AND CTC LAB REPORT # 96-026 (FOR CASE II), PER PROTOCOLS TAS-201, TAS-202 AND TAS-203.

2. ALL ALUMINUM EXTRUSIONS SHALL BE 6063-T5 ALLOY (UNLESS OTHERWISE NOTED).

3. ALL ALUMINUM SHEET METAL TO BE 3105-H14 ALLOY.

4. ALL SCREWS TO BE STAINLESS STEEL 304 OR 316 SERIES WITH 50 ksi YIELD POINT AND 90 ksi TENSILE STRENGTH OR CORROSION RESISTANT COATED CARBON STEEL AS PER DIN 50018 & SHALL COMPLY W/ FLORIDA BUILDING CODE SECTION 2411.3.3.4.

5. BOLTS TO BE 2024-T4 ALUMINUM ALLOY, GALVANIZED OR STAINLESS STEEL WITH 36 ksi MINIMUM YIELD STRENGTH.

6. ANCHORS TO WALL SHALL BE AS FOLLOWS: (UNLESS OTHERWISE NOTED)

(A) TO EXISTING POURED CONCRETE:

- 1/4" ZAMAC NAILIN, AS MANUFACTURED BY POWER FASTENERS, INC.
- 1/4" x 7/8" POWER CALK-IN, AS MANUFACTURED BY POWER FASTENERS, INC.

NOTES:

A.1) MINIMUM EMBEDMENT OF 1/4" ZAMAC NAILIN ANCHORS IS 1 3/4".

A.2) MINIMUM EMBEDMENT OF 1/4" x 7/8" POWER CALK-IN INTO POURED CONCRETE IS 7/8", NO EMBEDMENT INTO STUCCO SHALL BE CONSIDERED AS PART OF THE REQUIRED EMBEDMENT.

A.3) IN CASE THAT PRECAST STONE, PRECAST CONCRETE PANELS, OR PAVERS BE FOUND ON THE EXISTING WALL OR FLOOR, ANCHORS SHALL BE LONG ENOUGH TO REACH THE MAIN STRUCTURE BEHIND SUCH PANELS. ANCHORAGE SHALL BE AS INDICATED ON NOTES A.1 AND A.2 ABOVE. 1/4" -20 SCREWS USED SHALL BE 1 1/2" LONG MINIMUM SHOULD STUCCO EXIST.

B) TO EXISTING CONCRETE BLOCK WALL:

- 1/4" ZAMAC NAILIN, AS MANUFACTURED BY POWER FASTENERS, INC.
- 1/4" x 7/8" POWER CALK-IN, AS MANUFACTURED BY POWER FASTENERS, INC.

NOTES:

B.1) MINIMUM EMBEDMENT OF 1/4" ZAMAC NAILIN ANCHORS INTO CONCRETE BLOCK UNIT SHALL BE 1 1/8".

B.2) MINIMUM EMBEDMENT OF 1/4" x 7/8" POWER CALK-IN INTO CONCRETE BLOCK IS 7/8", NO EMBEDMENT INTO STUCCO SHALL BE CONSIDERED AS PART OF THE REQUIRED EMBEDMENT.

1/4" -20 SCREWS USED SHALL BE 1 1/2" LONG MINIMUM SHOULD STUCCO EXIST.

B.3) IN CASE THAT PRECAST STONE, PRECAST CONCRETE PANELS, OR PAVERS BE FOUND ON THE EXISTING WALL OR FLOOR, ANCHORS SHALL BE LONG ENOUGH TO REACH THE MAIN STRUCTURE BEHIND SUCH PANELS. ANCHORAGE SHALL BE AS INDICATED ON NOTES B.1 AND B.2 ABOVE.

C) ANCHORS SHALL BE INSTALLED FOLLOWING ALL OF THE RECOMMENDATIONS AND SPECIFICATIONS OF THE ANCHOR'S MANUFACTURER.

D) CONNECTIONS INTO WOOD FRAME BUILDINGS SHALL BE PERFORMED AS PER DETAILS SHOWN ON SHEET 6.

7. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY THE SOUNDNESS OF THE STRUCTURE WHERE HURRICANE AWNING IS TO BE ATTACHED TO INSURE PROPER ANCHORAGE.

8. THIS HURRICANE AWNING SHALL ONLY REMAIN OPENED FOR SUSTAINED WIND SPEEDS UP TO 74 m.p.h. EACH HURRICANE AWNING FRAME MUST BE PERMANENTLY LABELED WITH A WARNING NOTE STATING THAT TO SECURE HURRICANE AWNING IN A CLOSED POSITION, REMOVE PIPE SUPPORTS, FOLD HURRICANE AWNING DOWN, AND FASTEN ANGLE BRACKETS AND TIE DOWN STRAPS TO EXISTING WALL.

9. HURRICANE AWNING SHALL ONLY BE INSTALLED AT ELEVATIONS MEASURED AT TOP OF AWNING UP TO 15'-0" RESPECT TO GRADE.

10. (A) THIS PRODUCT APPROVAL DOCUMENT (P.A.D.) PREPARED BY THIS ENGINEER IS GENERIC AND DOES NOT PROVIDE INFORMATION FOR A SITE SPECIFIC PROJECT; I.E. WHERE THE SITE CONDITIONS DEVIATE FROM THE P.A.D.

(B) CONTRACTOR TO BE RESPONSIBLE FOR THE SELECTION, PURCHASE AND INSTALLATION OF THIS PRODUCT BASED ON THIS PRODUCT APPROVAL PROVIDED HE/SHE DOES NOT DEVIATE FROM THE CONDITIONS DETAILED ON THIS DOCUMENT.

(C) THIS PRODUCT APPROVAL DOCUMENT WILL BE CONSIDERED INVALID IF MODIFIED.

(D) SITE SPECIFIC PROJECTS SHALL BE PREPARED BY A FLORIDA REGISTERED ENGINEER OR ARCHITECT WHICH WILL BECOME THE ENGINEER OF RECORD (E.O.R) FOR THE PROJECT AND WHO WILL BE RESPONSIBLE FOR THE PROPER USE OF THE P.A.D. ENGINEER OF RECORD, ACTING AS A DELEGATED ENGINEER TO THE P.A.D. ENGINEER, SHALL SUBMIT TO THIS LATTER THE SITE SPECIFIC DRAWINGS FOR REVIEW.

(E) THIS P.A.D. SHALL BEAR THE DATE AND ORIGINAL SEAL AND SIGNATURE OF THE PROFESSIONAL ENGINEER THAT PREPARED IT.

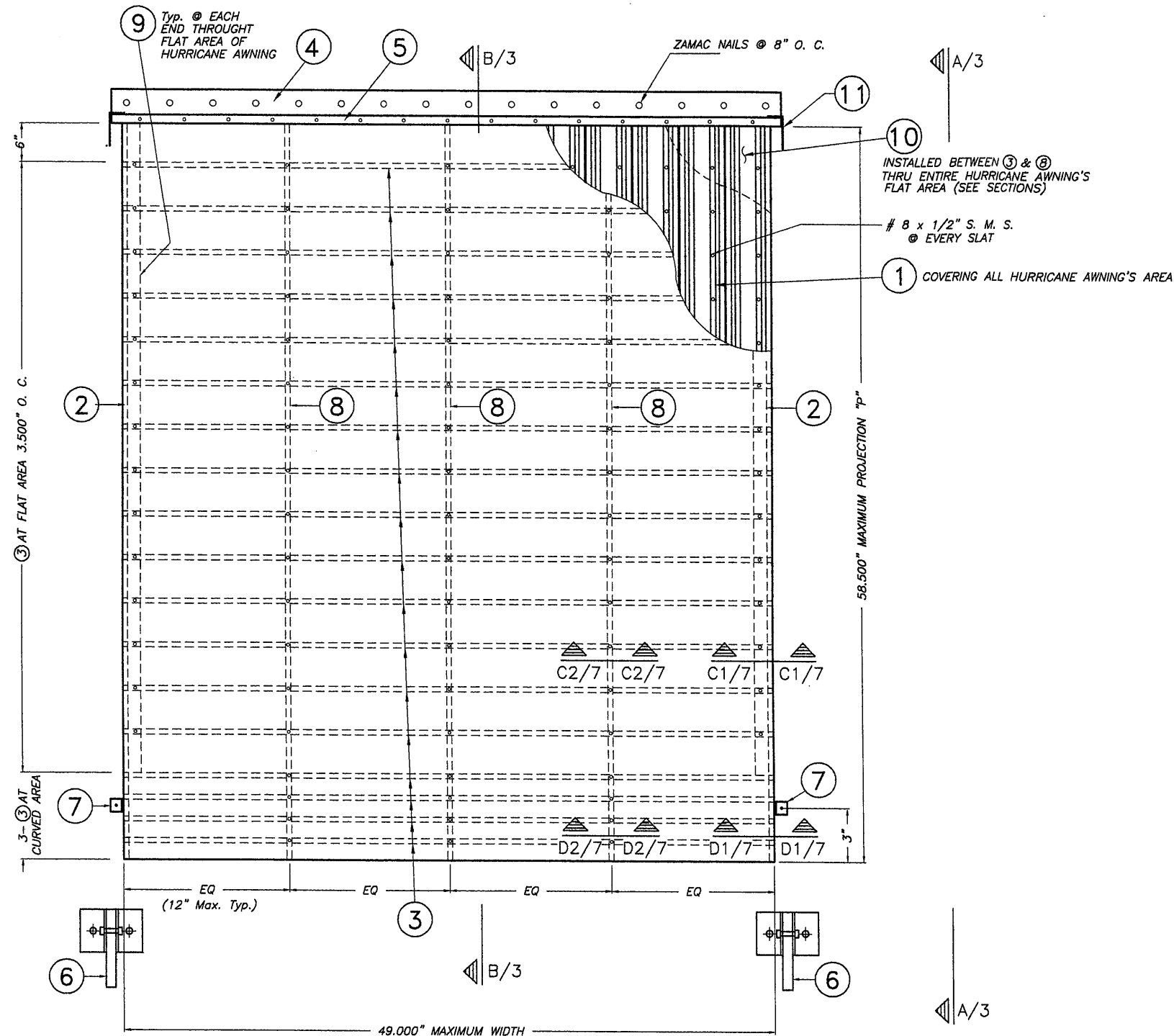
11. HURRICANE AWNING MANUFACTURER'S LABEL SHALL BE PLACED ON THE EXPOSED SURFACE OF SIDE STIFFENER (COMPONENT 2).

GROFF ALUMINUM FLORIDA CORPORATION.  
OPALOCKA, FLORIDA.

MIAMI-DADE COUNTY PRODUCT CONTROL APPROVED.

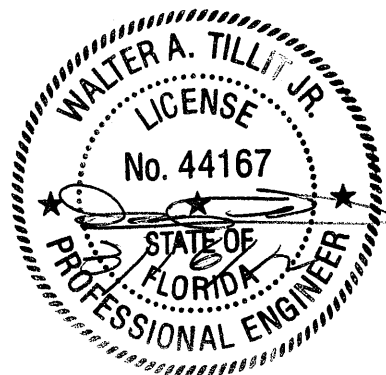
FLORIDA BUILDING CODE (High Velocity Hurricane Zone)

© 2012 TILTECO INC.		HURRICANE AWNING		DRAWN BY: L.G./A.G.	
		GROFF ALUMINUM FLORIDA CORPORATION		03/15/12 DATE	
TILLIT TESTING & ENGINEERING COMPANY 6355 N.W. 36th. St., Ste. 305, VIRGINIA GARDENS, FL 33166 Phone: (305)871-1530 . Fax: (305)871-1531 e-mail: tilteco@aol.com EB-0006719		13125 NW 47 AVE OPALOCKA, FL. 33054 PH: (305) 687-4195, FAX: (305) 681-6613		12-084 DRAWING No	
REV. No	DESCRIPTION	DATE	REV. No	DESCRIPTION	DATE
1	OLD 09-029	3/15/12	4		
2			5		
					SHEET 1 OF 7



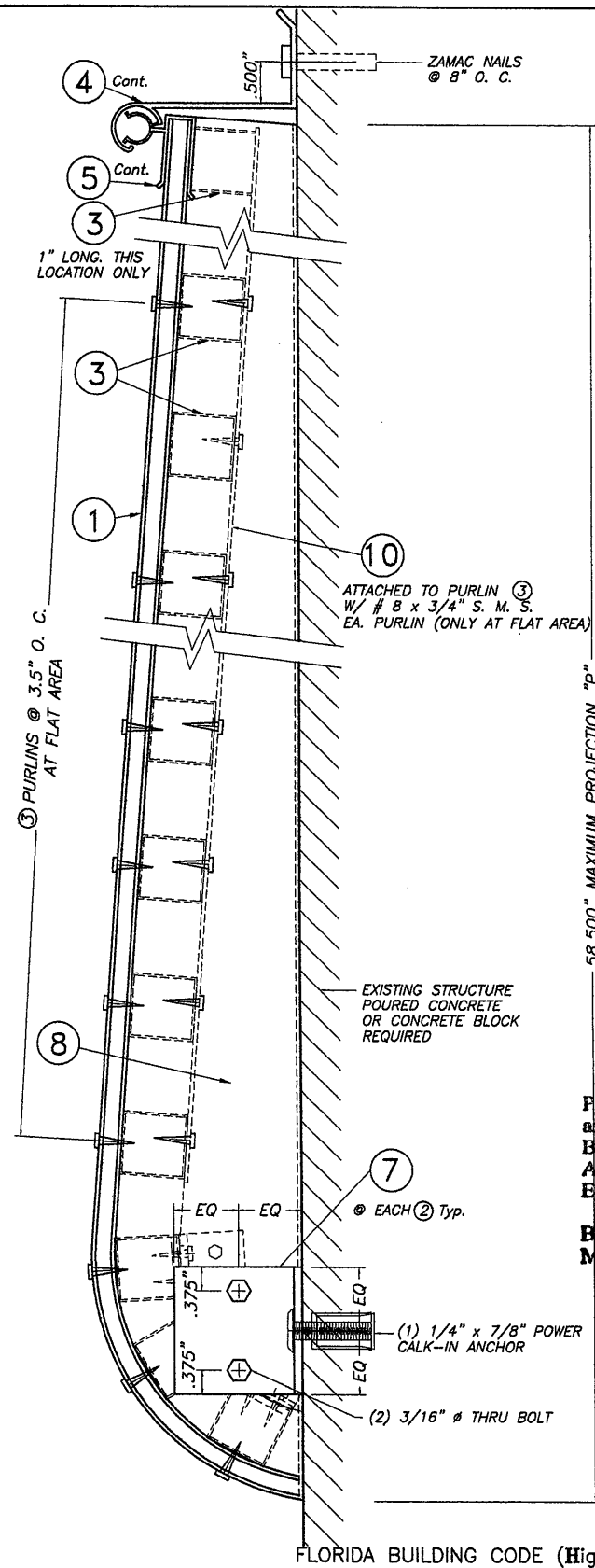
# **EXTERIOR ELEVATION CASE "I"**

SCALE : N.T.S.



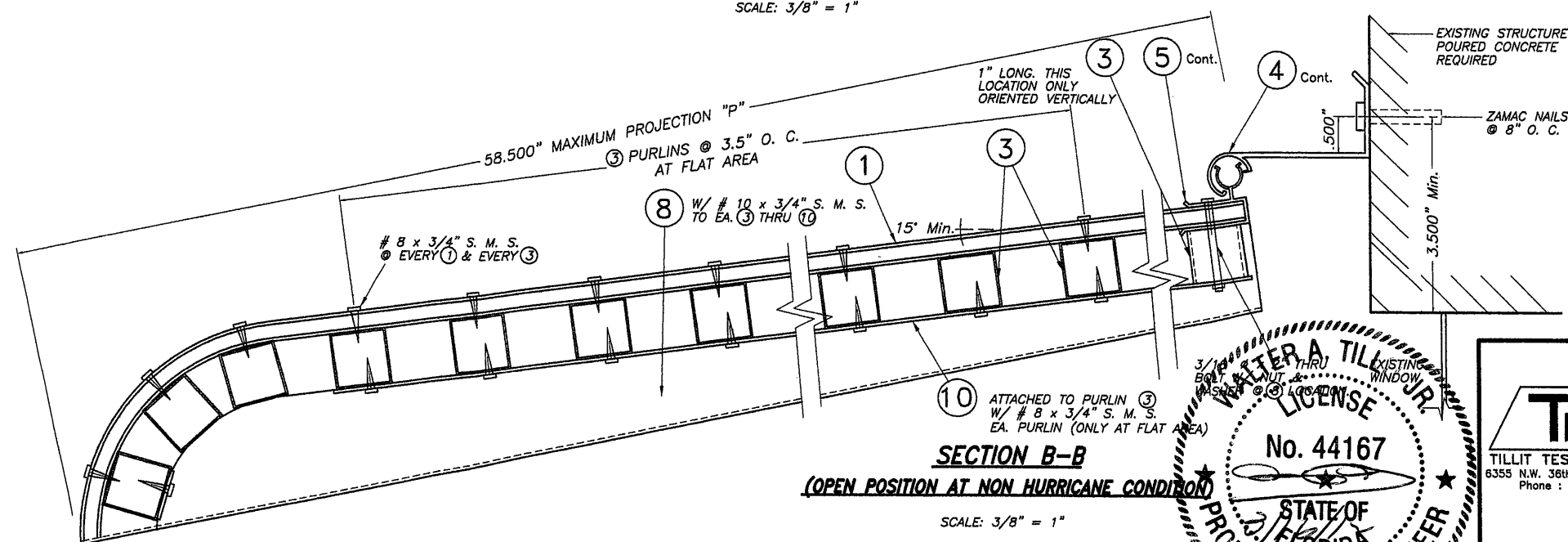
© 2012 TILTECO INC.					
<div> <div>TILTECO INC.</div> <div> TILLIT TESTING &amp; ENGINEERING COMPANY  6355 N.W. 36th. St., Ste. 305, VIRGINIA GARDENS, FL 33166  Phone : (305)871-1530 . Fax : (305)871-1531  e-mail: tilteco@aol.com  EB-0006719  WALTER A. TILLIT Jr. P.E.  FLORIDA Lic. # 44167 </div> </div>					
FLORIDA BUILDING CODE (High Velocity Hurricane Zone)				DRAWN BY: L.G./A.G.	
HURRICANE AWNING				03/15/12 DATE	
GROFF ALUMINUM FLORIDA CORPORATION				12-084 DRAWING No	
13125 NW 47 AVE OPALOCKA, FL. 33054 PH: (305) 687-4195, FAX: (305) 681-6613				SHEET 2 OF 7	
REV. No	DESCRIPTION	DATE	REV. No	DESCRIPTION	DATE
1	OLD 09-029	3/15/12	4		
2			5		

PRODUCT REVISED  
as complying with the Florida:  
Building Code  
Acceptance No 12-0529.22  
Expiration Date 08/01/2013  
By Healy A. Miller  
Miami Dade Product Control



SCALE:  $3/8" = 1"$

PRODUCT REVISED  
as complying with the Florida  
Building Code  
Acceptance No. 12-0529.22  
Expiration Date 08/01/2013  
By He L. A. Moh  
Miami Dade Product Control



SECTION B-B  
(OPEN POSITION AT NON HURRICANE CONDITION)

SCALE:  $3/8" = 1"$

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6355 NW 36th. St., Ste. 305, VIRGINIA GARDENS, FL 33166  
Phone : (305)871-1530 . Fax : (305)871-1531  
e-mail: tilteco@aol.com  
EB-0006719  
WALTER A. TILLIT Jr. P.E.  
FLORIDA Lic. # 44167

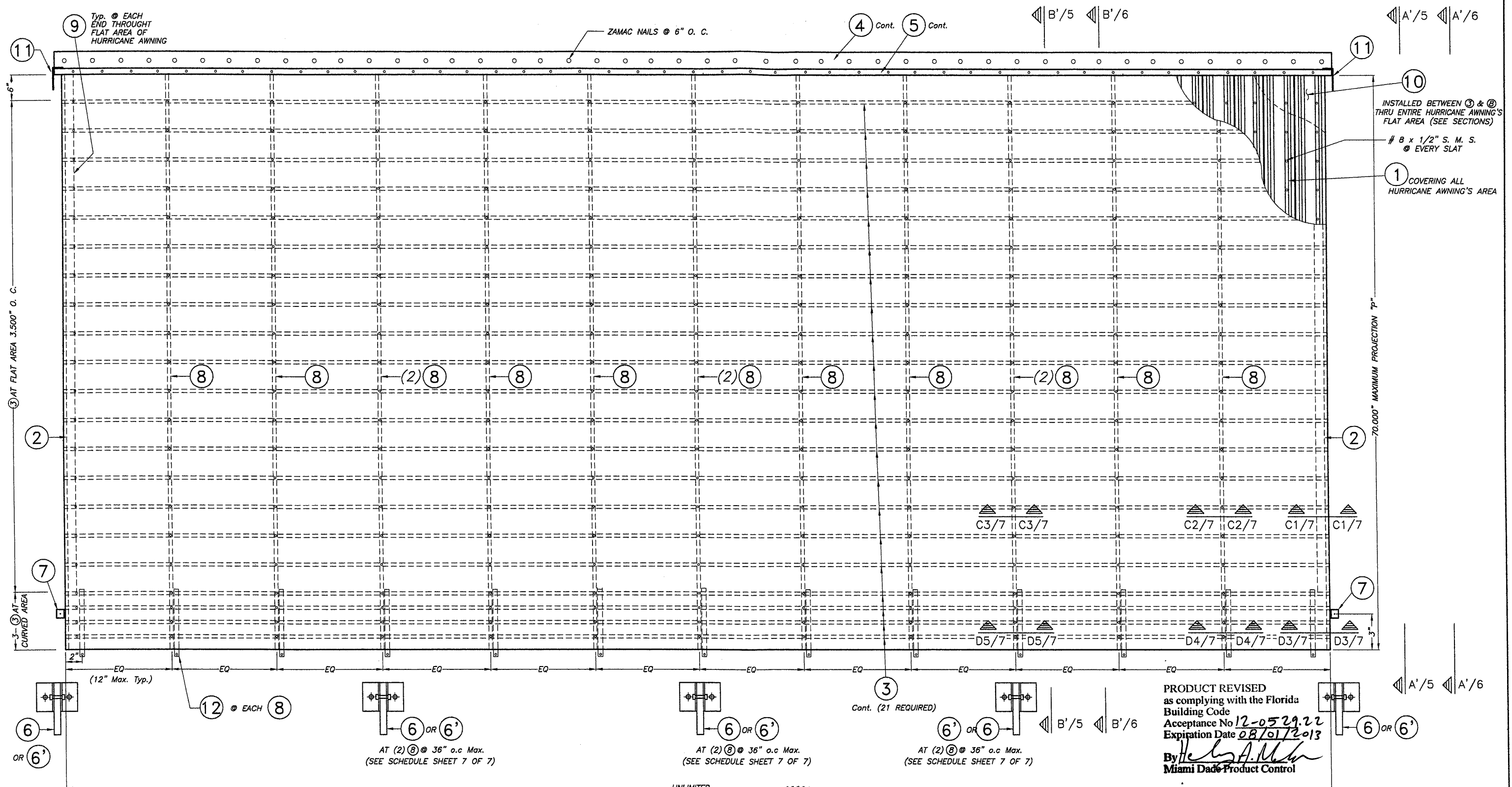
13125 NW 47 AVE  
OPALOCKA, FL. 33054  
PH: (305) 687-4195, FAX: (305) 681-6613

12-084  
DRAWING No

REV. No	DESCRIPTION	DATE	REV. No	DESCRIPTION	DATE
1	OLD 09-029	3/15/12	4		
2			5		

SHEET 3 OF 7





NOTE :  
SHUTTER FRAMING SHOWN ON THIS SHEET FOR  
EXTERIOR ELEVATION CASE "II" IS REQUIRED WHEN  
HURRICANE AWNING'S WIDTH OR PROJECTION EXCEEDS  
MAXIMUM ALLOWED DIMENSIONS FOR EXTERIOR  
ELEVATION CASE "I", SHOWN ON SHEET 2 OF 7.

**EXTERIOR ELEVATION CASE "II"**

SCALE : N.T.

WALTER A. TILLIT  
No. 44167  
STATE OF FLORIDA  
PROFESSIONAL ENGINEER

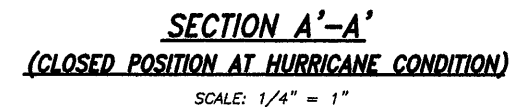
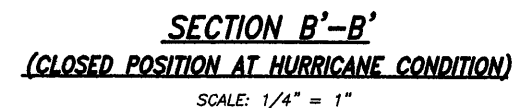
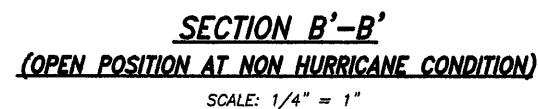
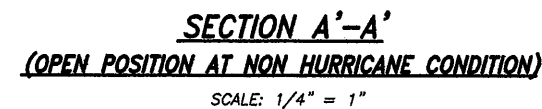
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FLORIDA Lic. # 44167

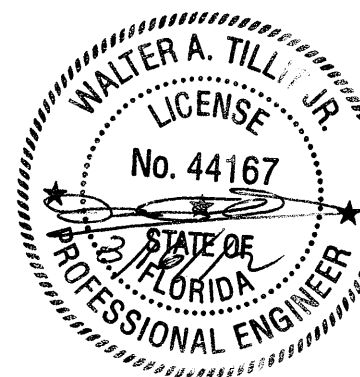
FLORIDA BUILDING CODE (High Velocity Hurricane Zone)					
HURRICANE AWNING				DRAWN BY: L.G./A.G.	
GROFF ALUMINUM FLORIDA CORPORATION				03/15/12 DATE	
13125 NW 47 AVE OPALOCKA, FL. 33054 PH: (305) 687-4195, FAX: (305) 681-6613				12-084 DRAWING No	
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1	OLD 09-029	3/15/12	4		
2			5		

SHEET 4 OF 7



PRODUCT REVISED  
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FLORIDA BUILDING CODE (High Velocity Hurricane Zone)

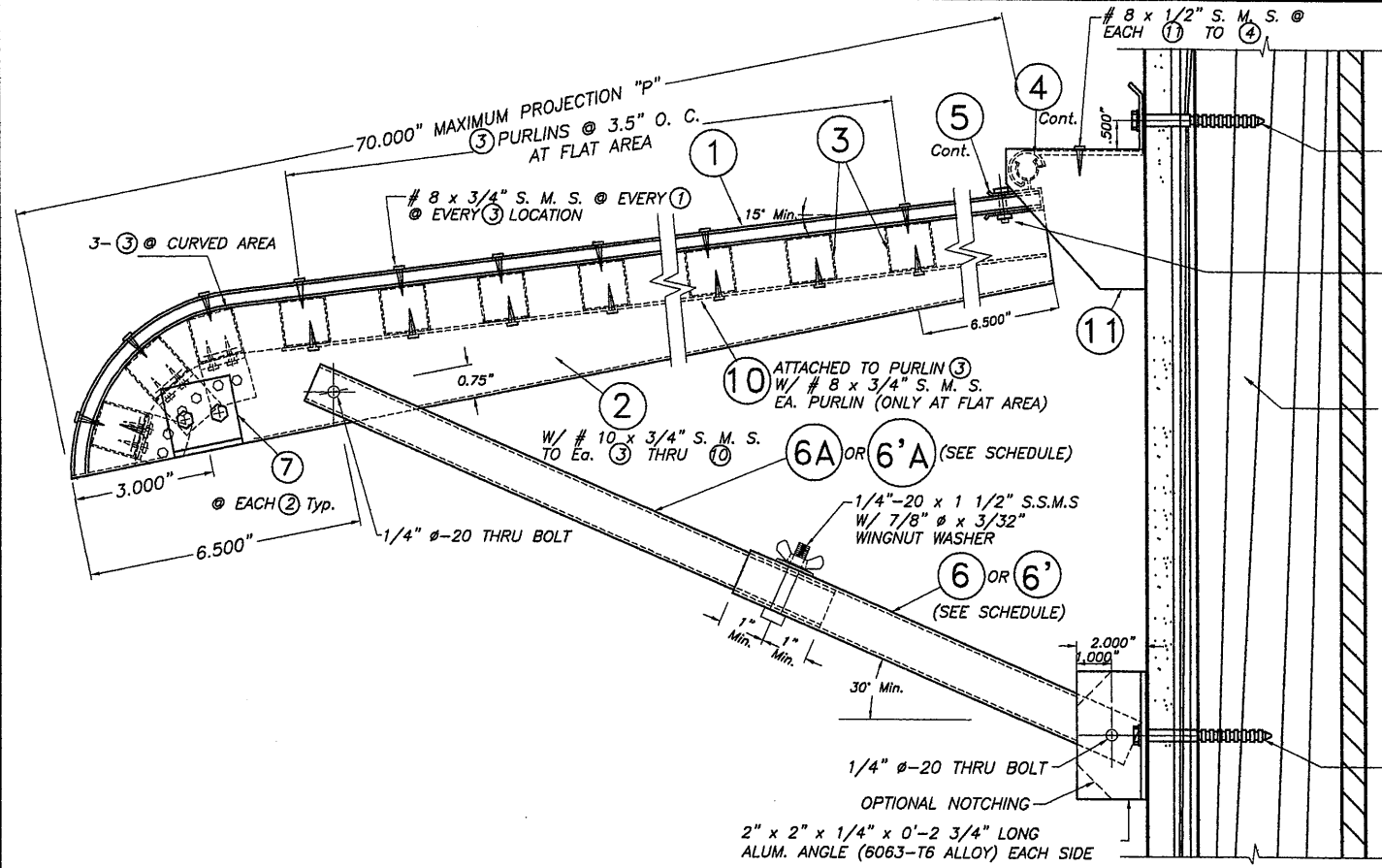


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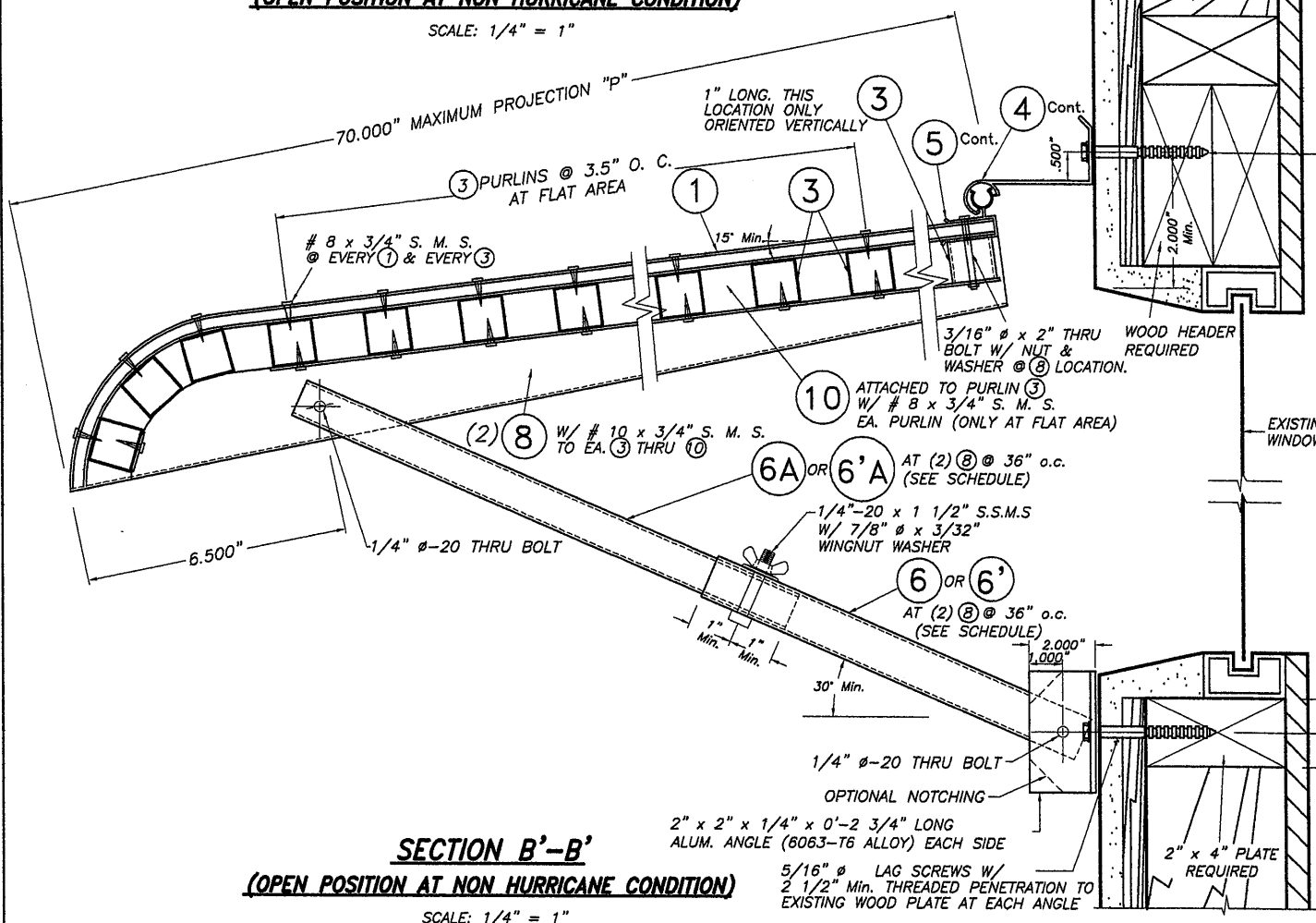
**TILLIT TESTING & ENGINEERING COMPANY**  
6355 N.W. 36th. St., Ste. 305, VIRGINIA GARDENS, FL 33166  
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WALTER A. TILLIT JR. P.E.  
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<h1 style="margin: 0;">HURRICANE AWNING</h1>	DRAWN BY: L.G./A.G.
<h2 style="margin: 0;">GROFF ALUMINUM FLORIDA CORPORATION</h2> <p style="margin: 0;">13125 NW 47 AVE OPALOCKA, FL. 33054 PH: (305) 687-4195, FAX: (305) 681-6613</p>	03/15/12 DATE
	12-084 DRAWING No



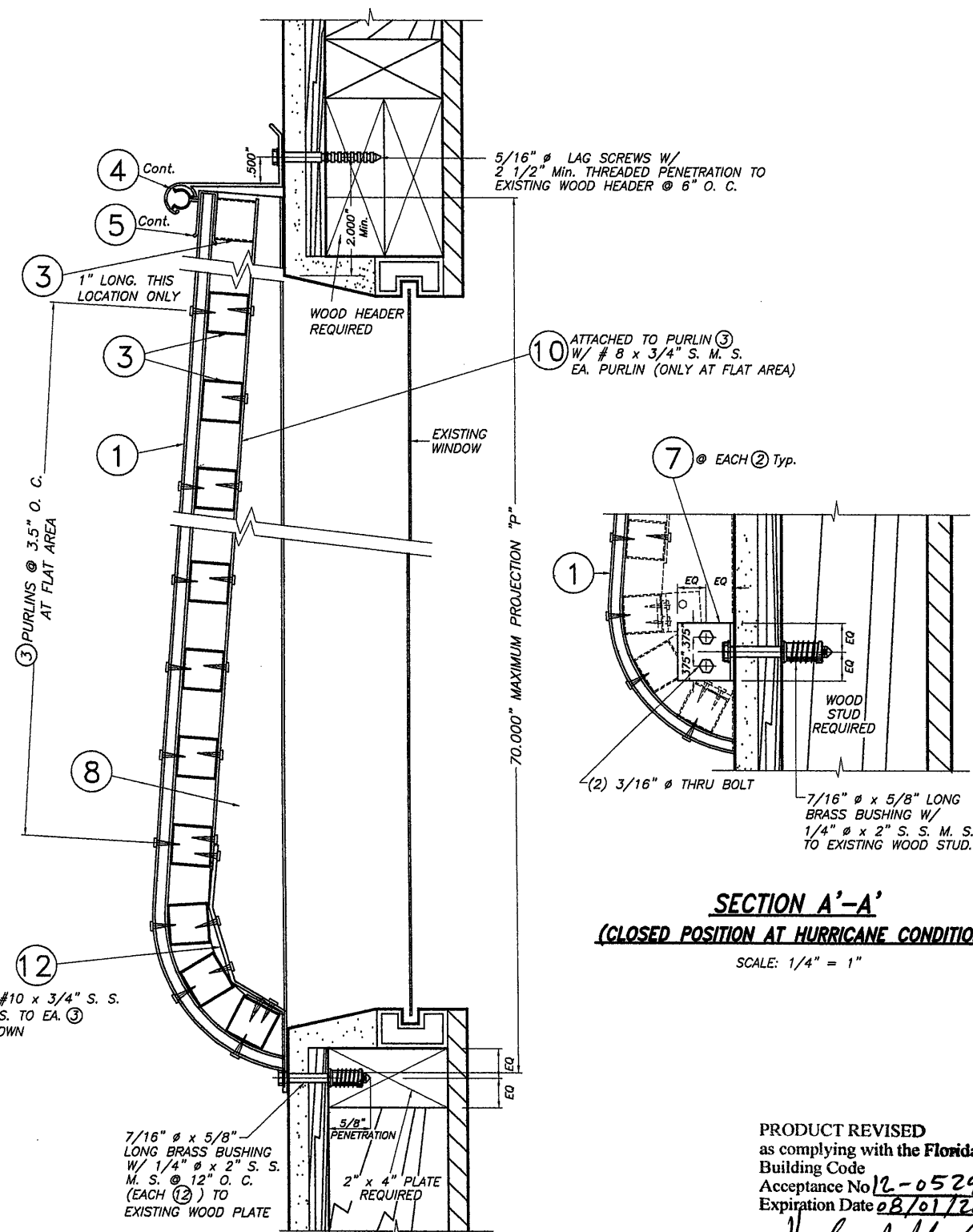
**SECTION A'-A'**  
 (OPEN POSITION AT NON HURRICANE CONDITION)

SCALE: 1/4" = 1"



**SECTION B'-B'**  
 (OPEN POSITION AT NON HURRICANE CONDITION)

SCALE: 1/4" = 1"



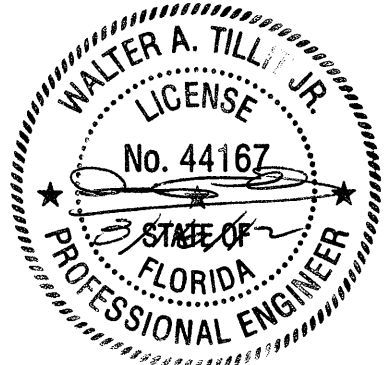
**SECTION A'-A'**  
 (CLOSED POSITION AT HURRICANE CONDITION)

SCALE: 1/4" = 1"


**SECTION B'-B'**  
 (CLOSED POSITION AT HURRICANE CONDITION)

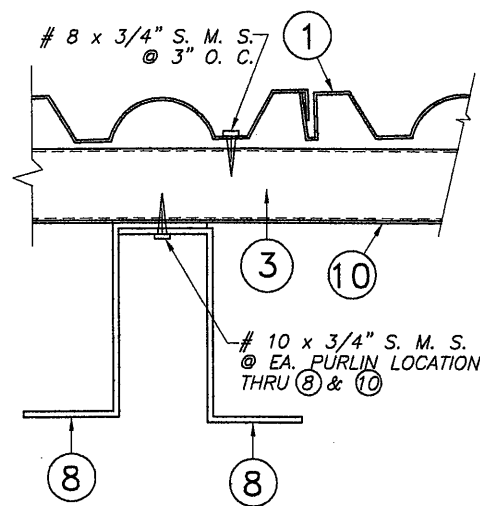
SCALE: 1/4" = 1"

FLORIDA BUILDING CODE (High Velocity Hurricane Zone)



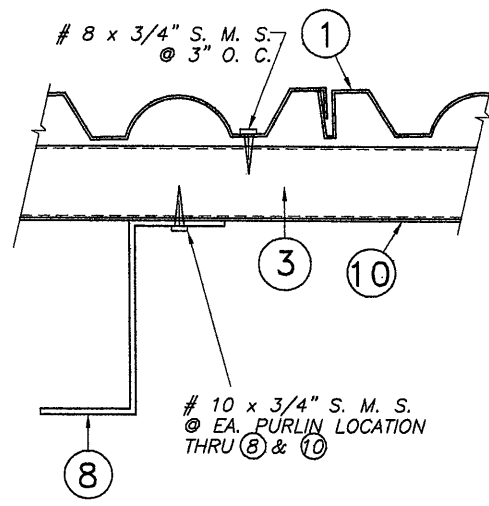
PRODUCT REVISED as complying with the Florida Building Code  
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<div><p><b>TILTECO INC.</b></p><p>TILLIT TESTING &amp; ENGINEERING COMPANY 6355 N.W. 36th. St., Ste. 305, VIRGINIA GARDENS, FL. 33166 Phone : (305)871-1530 . Fax : (305)871-1531 e-mail: tilteco@aol.com EB-0006719 WALTER A. TILLIT Jr. P.E. FLORIDA Lic. # 44167</p></div>		GROFF ALUMINUM FLORIDA CORPORATION				03/15/12 DATE					
		13125 NW 47 AVE OPALOCKA, FL. 33054 PH: (305) 687-4195, FAX: (305) 681-6613				12-084 DRAWING No					
		REV. No		DESCRIPTION		DATE		REV. No		DESCRIPTION	
1		OLD 09-029		3/15/12		4					
2						5					
SHEET 6 OF 7											



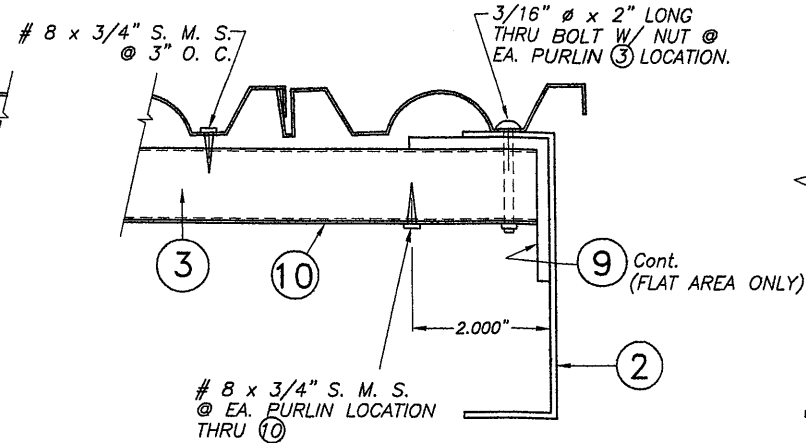
**SECTION C3-C3**

SCALE: 1/2" = 1"



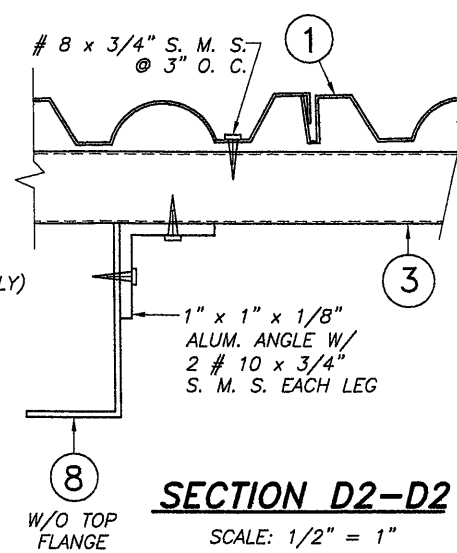
**SECTION C2-C2**

SCALE: 1/2" = 1"



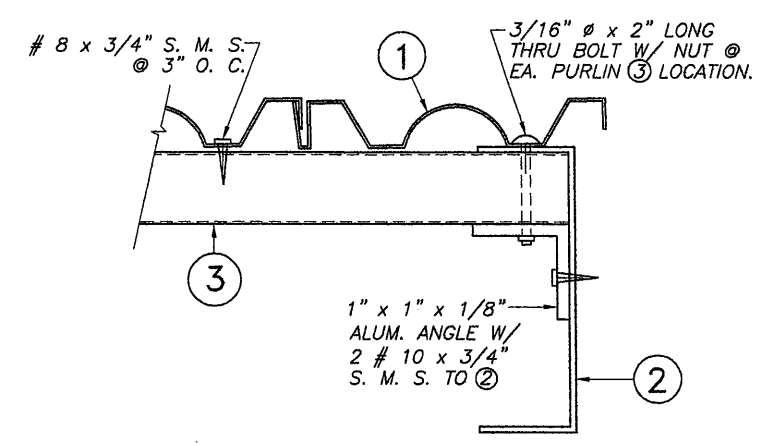
**SECTION C1-C1**

SCALE: 1/2" = 1"



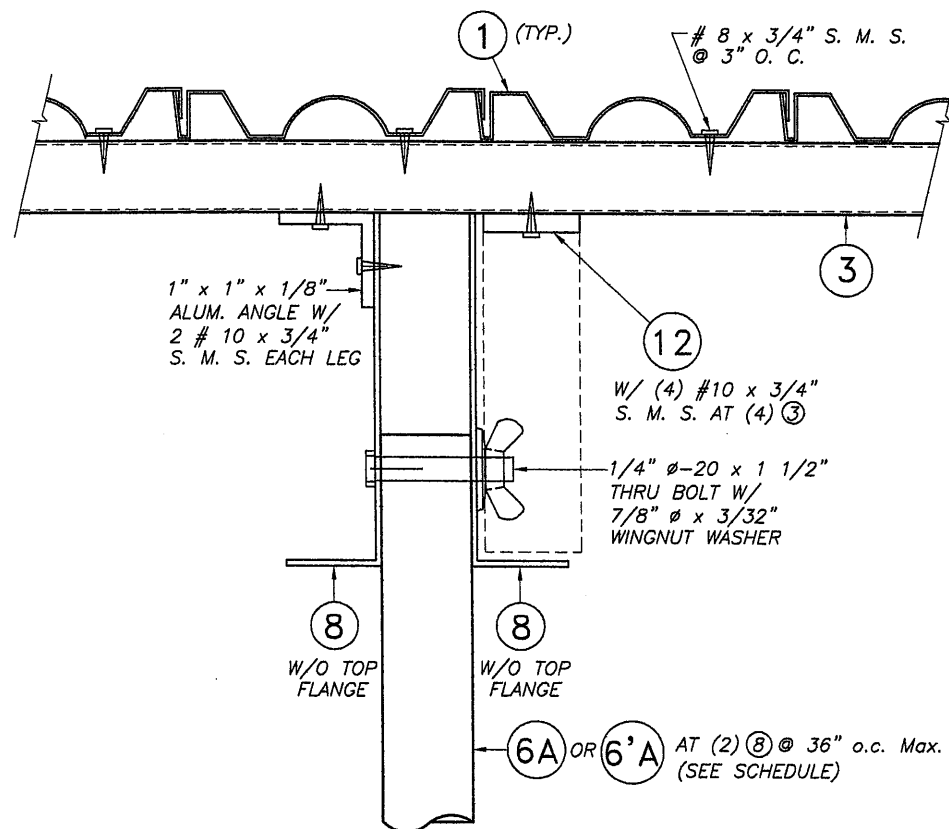
**SECTION D2-D2**

SCALE: 1/2" = 1"



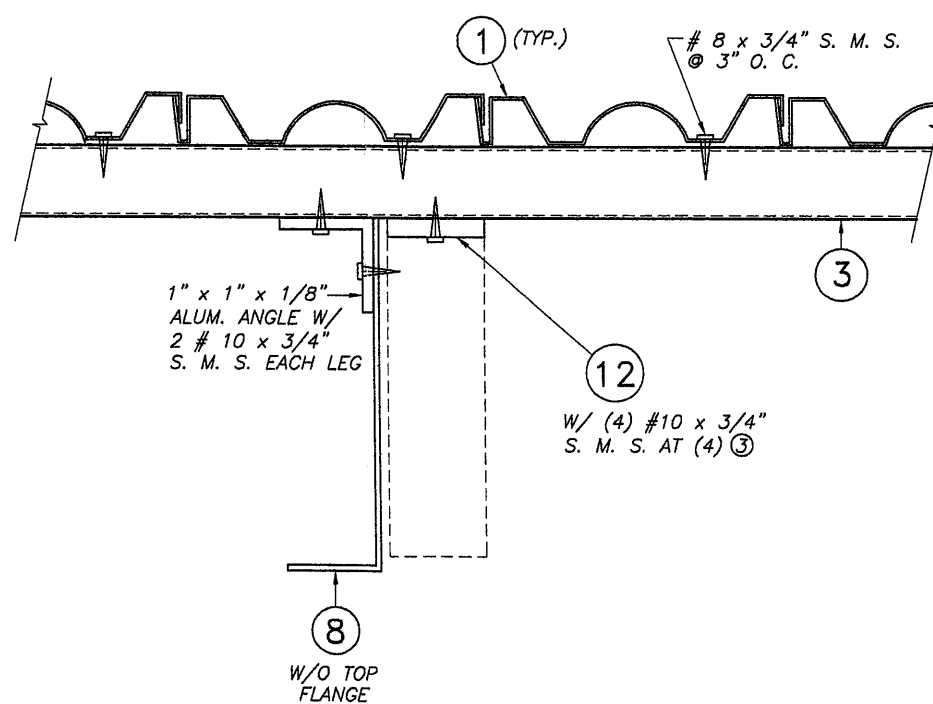
**SECTION D1-D1**

SCALE: 1/2" = 1"



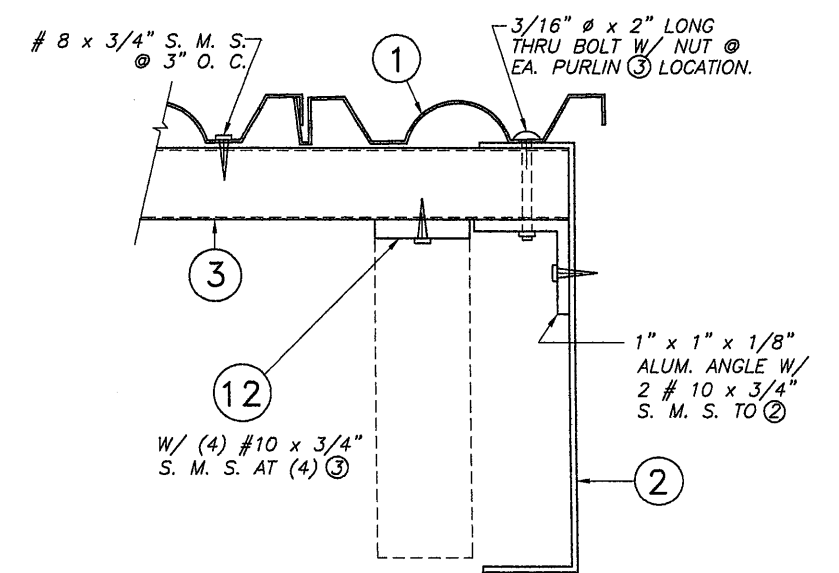
**SECTION D5-D5**

SCALE: 1/2" = 1"



**SECTION D4-D4**

SCALE: 1/2" = 1"

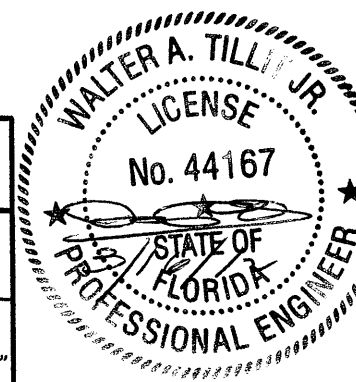


**SECTION D3-D3**

SCALE: 1/2" = 1"

**MAXIMUM A.S.D. DESIGN PRESSURE RATING (p.s.f.) AND  
CORRESPONDING MAXIMUM SPAN SCHEDULE**

MAX. A.S.D. DESIGN PRESSURE RATING (p.s.f.)	MAXIMUM SHUTTER DIMENSIONS	APPLICABLE ELEVATION CASE AND SUPPORTING STRUCTURE CONDITIONS	MINIMUM REQUIRED SEPARATION TO GLASS	BRACE REQUIREMENTS
+50.0, -67.0	Max. WIDTH = 49" Max. PROJECTION "P" = 58.5"	I (SHEET 2 OF 7) SHUTTER INSTALLED ONLY INTO C. B. S. BUILDING	NONE REQUIRED	(6), (6A)
+50.0, -55.5	Max. WIDTH = UNLIMITED Max. PROJECTION "P" = 70"	II (SHEET 4 & 5 OF 7) SHUTTER INSTALLED INTO C. B. S. OR WOOD FRAME BLDGS.	NONE REQUIRED	(6), (6A) FOR "P" < 60" (6'), (6'A) FOR "P" ≥ 60" UP TO 70"



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